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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,225	03/05/2002	Jens Boettcher	10191/2274	8682

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EXAMINER	
NGO, KIET TUAN	

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/092,225	BOETTCHER, JENS	
	Examiner	Art Unit	
	Kiet T. Ngo	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03/05/2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 15 are pending in the application.

Information Disclosure Statement

2. The information disclosure statements filed March 3rd, July 19th, and September 3rd 2002 fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

3. The disclosure is objected to because of the following informalities: On page 8, line 15 the word value is spelled incorrectly. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 – 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following terms lack antecedent basis:

(i) "the plurality of tasks" in claim 7 and 10.

B. The following claim language is indefinite:

(i) As per claim 1, lines 8 – 9, it is not clear when determining running time is it referring to determining the running time of one of the plurality of tasks or each of the plurality of tasks (i.e. when determining the running time of a task does it intend to determine all of the running times or just simply one of the running times of the plurality of tasks?)

(ii) As per claim 6, line 4, it is uncertain in what way the added value is set in proportion to the time interval (i.e. is there some equation or method that must be followed in order to determine this load of the computing element?)

(iii) As per claim 7, lines 4 – 5, and claim 10, lines 3 – 4; it is unclear if "the plurality of tasks" refers to "each of the plurality of task in claim 1, line 2.

(iii) As per claim 10, lines 6 – 7; and claim 14, lines 6 – 7; these claims have the same deficiency as claim 1 above. Correction is required.

(iv) As per claim 14, line 4, it is unclear what an arrangement is in reference to selecting a time interval (i.e. how are these tasks arranged so that the time interval will have one of the plurality of tasks such that one of the plurality of tasks are started and ended during the time interval?)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1 through 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumamoto (U.S. Patent #5,265,249), in view of Guinther et al. (U.S. Patent #6,016,466).

7. As to claims 1, 7, 10, and 14, Kumamoto teaches a method for determining a load of a computing element on which a computer program is executed;

the computer program (system program) being subdivided into a plurality of tasks [col. 2, lines 16 – 20], each of the plurality of tasks including one at least one process (jobs) [col. 2, lines 20 – 23];

selecting a time interval (time interval data) such that at least one of the plurality of task (one or more simultaneously running tasks) is started and ended during the interval [col. 2, lines 30 – 35];

determining a running time (derive a run time) of the at least one of the plurality of tasks during the time interval after a completion of one of the at least plurality of tasks and each of the plurality of tasks (Tr1 = t10 (completion time) – t1 (start time)) [col. 4, lines 28 – 35];

as well as the logging of time when starting (roll-in process), stopping (roll-out process), and restarting of a process (roll-in process) [col. 3, lines 17 – 65];

but fails to specifically teach the logging of the time when a process was interrupted or inactive. However, Guinther discloses accounting for the time when a task is interrupted by another one of the plurality of tasks by,

subtracting a running time of the other one of the plurality of tasks from a running time (compensate for any amount of time that the portion was swapped out in a multitasking operating system) that includes the running time of the at least one of the plurality of tasks and the running time of the other of the plurality of tasks (subtract the first time stamp value from the second time stamp value to determine execution time). [col. 2, lines 27 – 38; col. 21, lines 20 – 67; col. 22 lines 1 – 11; Figure 15]

8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Kumamoto and Guinther as it would have enabled one to have a better representation of when a process was active while accounting for interrupts [col. 2, lines 63 – 67; col. 3, lines 1 – 5].

9. As to claims 2, and 15, Kumamoto teaches selecting the time interval such that two processes are started and ended during the time interval [col. 2, lines 30 – 35] as well as determining each running time in sequence in which each task was completed [col. 3, lines 17 – 67; col. 4 lines 1 – 10].

10. As to claim 3, Kumamoto discloses;

Setting a variable to zero before calculating running times [col. 3, line 17] as well as determining the running times of each of the plurality of tasks when completed based on start time of each task, end time of each task, as well as based upon the variable set to zero at the beginning of the calculations of running times [col. 1, lines 47 – 57, col. 4, lines 23 – 33].

Determining a new variable is based with a *tstart* (time data t1) start time counter running during an execution of the computer program as a start of each of the plurality of tasks [col. 3, line 20 – 21], a *tend* (time data t10) value of the time counter at the end of each of the plurality of tasks [col. 4, line 23 – 28], a *Unterbrstart* (task count field) being a value of the variable at the start of each of the plurality of tasks [col. 3, 18 – 20], and *Unterbrend* (task count field) [col. 4, lines 30 – 33] being a value of the variable at the end of each of the plurality of tasks.

11. As to claim 4, Kumamoto discloses storing each running time tasks into individual memory locations [col. 1, lines 54 – 60, 4 Figure 1].

12. As to claim 5, Kumamoto diagrams a main memory [4 Figure 1] but fails to explicitly state that this memory can include random access memory. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include these memory types, as they are well known in the art and Kumamoto teaches storing the run-times in memory.

13. As to claim 6, Kumamoto discloses determining the load of the computing element by forming an added value (i.e. calculating the total running times for each of his plurality of tasks by adding the value of each of the running times of the plurality of tasks), [col. 4, lines 34 – 57], but fails to explicitly teach setting this proportion in relation to a total interval time. It would have been obvious to one of ordinary skill in the art at the time the invention was made to calculate using the total running time value and the interval time in order to determine a relationship between process usage. This would give a user an appropriate weight for process time in relationship to total interval time.

14. As to claims 8 and 13, Kumamoto diagrams a main memory [4 Figure 1] but fails to explicitly state that this memory can include read only memory, random access memory, and flash memory. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include these memory types, as they are well known in the art.

15. As to claims 9 and 11, Kumamoto discloses a microprocessor [1-1, 1-2, 1-3, 1-4 Figure 1] in his system.

16. As to claim 12, Kumamoto disclose a memory element [4 Figure 1].

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

" Method and apparatus for accurate profiling of computer programs" Bennet et al. U.S. Patent (#6,126,329)

"System for executing, scheduling, and selectively linking time dependent processes based upon scheduling time thereof" May et al. U.S. Patent (#4,989,133)

"Periodic Process Timer" Peters et al. U.S. Patent (#6,385,637)

"Measuring Execution Time and Real-Time Performance" David B. Stewart *Embedded Systems Conference, San Francisco, CA, April 2001*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet T. Ngo whose telephone number is (571)272-6451. The examiner can normally be reached on Mon. - Fri. 830-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-An Ai can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER